

REMARKS/ARGUMENTS

Claims 1-5, 9, 11, 12, and 14-19 are pending.

The specification was objected to in connection with recited "first program" and "second program" in claims 1 and 9. In response, claims 1 and 9 have been amended to recite "program code" which include various recited modules, and no longer recites a specific first program or a second program. The objection is believed to be overcome.

Claims 1-5, 9, 11, 12, and 14 are rejected under 35 U.S.C. § 103(b) as being anticipated by Rabinovich, U.S. Patent No. 6,256,675.

Without conceding to the merits of the rejection, Applicant has amended the claims to further distinguish Rabinovich. Claims 15-19 have been appended. Fig. 10 is illustrative of the additionally recited subject matter. No new matter has been added.

Rabinovich relates creating replicas and moving replicas in order to distribute access requests for an object, and to manage the placement of the replicas among hosts. The present invention, on the other hand, allows a file server to improve accessibility to its files for clients that are distant from the file server. The present invention also maintains consistency of data and reduces overhead and traffic between networks.

In one aspect of the present invention, a target file on a file server that is determined to be frequently accessed by a client is migrated (as opposed to copied) from that file server to a file server that is closer to the client. In an embodiment, the file server has a table to store information about files it has migrated including path names of the migrated files. Since, the files are migrated rather than copied, there are no replicas and consequently data consistency is naturally maintained.

By comparison, Rabinovich discloses an access (request) distribution method wherein replicas of files to be accessed are migrated, deleted, and copied according to access frequency. See for example the discussion at column 10, lines 41-45. Consequently, Rabinovich's access and distribution of replicas necessarily requires synchronization of data in order ensure that the various replicas remain identical. This consistency control process takes more time to effect as the distance between computers that store the replicas increases. Moreover, in cases where the original file or one of the replicas are frequently updated,

consistency control processing increases and the latency period before a replica is update increases. See for example column 21, lines 54-62.

The present invention as recited in the pending claims addresses the foregoing shortcomings. For example, claim 1 as amended substantively recites for a first computer in a first network comprising, among other things, a CPU and memory containing program code including modules for:

- recording situations of access at predetermined intervals;
- searching for a candidate in a second network;
- designating a file in the first computer as a candidate for migration to a second computer on the second network;
- transferring the file to the second computer;
- storing information indicative of whether the file has been transferred to the second computer or the file exists in the first computer;
- storing a path name for the second computer when the file has been transferred to the second computer; and
- a module for receiving and storing the file in the first computer, when the file is returned from the second computer.

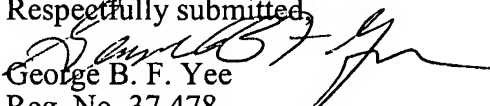
By comparison, Rabinovich merely discloses that a host periodically makes a decision regarding replica replacement. See for example column 14, line 44 to column 15, line 34. Consequently, Rabinovich's request distribution method increases network traffic because of the need for continuous synchronization activity among the distributed replicas. Rabinovich does not teach at least each of the foregoing limitations.

CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance and an action to that end is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 650-326-2400.

Respectfully submitted,


George B. F. Yee
Reg. No. 37,478

TOWNSEND and TOWNSEND and CREW LLP
Two Embarcadero Center, Eighth Floor
San Francisco, California 94111-3834
Tel: 650-326-2400 / Fax: 415-576-0300
GBFY / 61027131 v1